

BEAUTIFUL
Churches
OF TODAY

SOUTH PASADENA, CALIFORNIA • ONEONTA CONGREGATIONAL CHURCH • MARSH, SMITH & POWELL, ARCHITECTS



BEAUTIFUL
Churches
OF TODAY

CHRISTIAN MAN for twenty centuries has held amazingly steadfast to forms of the pointed Gothic arch in his houses of worship. The spire, the stained glass window, the vaulted ceilings of the nave are traditional. Ecclesiastical buildings, like religion's forms and ceremonies, resist change as heretical.

For nearly a decade now, an ever-widening group of ingenious western architects has slowly but surely set about to develop what amounts to a dramatic, modern Gothic style in church construction. Quick to grasp the almost limitless possibilities of a new engineering material—the glue-laminated wooden arch and beam—these men are today doing things with wood, shaped to their imaginative requirements, which has opened up great new vistas in church design.

With these wooden arches and beams, which are literally “shop grown” to exact shape and dimension specified by the designer, architects may have astounding latitudes in design. With these shaped-to-measure arches, they can build a cozy chapel in the pattern of the small English rural church with its oaken beams and hand-hewn wooden arches. Or, they can capture the towering impact of the vaulted cathedral with tapered arches of rare beauty and utility. They can design short, sturdy arches to span a tiny nave for a community church or they can let their imagination run rampant and glorious and get man-made wooden beams which will span an area large enough to seat 1000 worshippers and still not need support posts.

Versatility is the word for these factory-shaped timbers. The designer can retain the classical styling in his arches, or he can be completely informal. He can, and generally does, leave the arches and beams exposed. The exposed, solid wooden beam has high fire resistance and is noted for its ability to stay in place and hold its position even when subjected to fire and heat for relatively long periods, for the timbers merely char.

Engineers have been able to retain the strength and beauty of wood in these man-made arches. The full utilization of wood's natural strength is captured in the lamination of the large beams, made up from one- or two-inch lumber. Curvature and taper are easily accomplished.

Where arches will be exposed to weather, special phenolic and exterior type glues have been perfected. Manufacturers use either one- or two-inch lumber, the thickness determined by the radius of the curvature required in the finished arch.

Most popular arches being designed by western architects are the variations of the modern Gothic, the Tudor or “boomerang,” and the cathedral truss style. Traditional and classical arches can be matched with a faithfulness that is encouraging.

Western architects, in the past two years, have shown an inclination to depart rather daringly from the conventional and traditional ecclesiastical form. It must be admitted the effect is most pleasing and in every instance has been accomplished without any possible affront to man's traditional interpretation of what his house of worship should include.

By **ARTHUR W. PRIAULX**

Reprinted from ARCHITECT AND ENGINEER • April, 1952



WAYFARER'S CHAPEL

Portuguese Bend, Rancho Palos Verdes, California

PROBABLY the most startling of the many new church buildings recently designed and built along the Pacific Coast, and in which the laminated arch is the central theme of the structure, is Architect Lloyd Wright's amazing Wayfarer's Chapel at Portuguese Bend, California.

Here at Rancho Palos Verdes on a lookout perch or bench high above the Pacific is the church of the sun. It is a glass chapel, held together with ribs of laminated redwood. All the beauty of the outdoors is the varied fare of the worshipper as he listens to his sermon or chants his songs. It is eccentric, it is striking, yet it has a beauty and dignity which belongs to houses of worship of other lands.



INTERIOR . . . Wayfarer's Chapel
LLOYD WRIGHT, Architect

IT has remained for Portland's Warren Weber to design the most unique church structure built in the northwest in many years. This younger architect threw tradition almost out the window when he designed the Cedar Hills Community Church (Congregational) for Portland's rapidly expanding population in the west hills. The church property was on low ground. Funds were limited, as is usual in church jobs. Weber decided he could get needed height in his church and seating capacity by building a structure in a wedge or triangle shape, where walls become roof and roof serves the purpose of walls. Towering 40 feet above the low swale in which it stands, the structure is wedge-like. Straight laminated beams are anchored in the concrete slab and join in a V. They are covered with

two-inch, tongue-and-groove hemlock over which red cedar shingles have been laid. This is what Weber is pleased to call the contemporary Gothic arch. Large footings were built to prevent the wind from blowing the wedge over. Diagonal tie rods to give added rigidity were used in one section at the rear of the church and have been left exposed. On the east side of the roof-that-is-a-church is a large glass window, six by twenty-seven feet in size, which lights up the chancel, but lets in a side light which is not too bright for the worshippers. A clerestory light in the north end, facing the chancel and pulpit gives light to the other end of the remarkable church structure. Saw kerfs have been cut in the hemlock and give excellent acoustical results.

CEDAR HILLS COMMUNITY CHURCH

Near Portland, Oregon • **WARREN WEBER, Architect**

Ceiling 2" x 6" grooved hemlock and foyer walls of hemlock. Beams are glued laminated Douglas fir. Church is 29' long x 60' wide x 39' high.





Exterior combines beauty and durability of materials. Interiors show flexibility of laminated arches and use where four, corner fitted arches support heavy lantern and tower structure.

**ST. CLAIR
CATHOLIC CHURCH**
Portland, Oregon

BARRETT & LOGAN
Architects
JOHN R. MURTAUGH
Associate



BARRETT and LOGAN and associate Murtaugh, Portland architects, solved a difficult design problem in the St. Clair Catholic Church of Portland by creating laminated arches to support an extra-heavy lantern and tower.

Unusual are the four boomerang-type arches which rise up from the four corners of the intersection of the nave and transept. Smaller arches have been used in the nave and transept and these four larger arches, styled to match the rest of the church interior, project upward into the lantern well. The lantern, which contains clerestory lights on all four sides, rests atop the ribs of the arches. A post, joined where the four arches meet, becomes a support for the tower above the lantern which also fits into the roof member.

All arches in this structure have been chamfered to break any stiffness in square edges. The problem was to develop strength without undue increase in size of supporting members. The glue-laminated arches were the perfect solution for they enabled the designers to retain the beauty of the Gothic style found elsewhere in the church.





VALLEY COMMUNITY UNITED PRESBYTERIAN
West Slope, Oregon

DONALD W. EDMUNDSON, Architect • NEIL R. KOCHENDOERFER, Associate

ONE of the northwest's most active church designers is Donald W. Edmundson, Portland architect, who numbers more than twenty-five such edifices among his works of the past five years, all built around the glue-laminated arch of wood. Selected for its rare beauty and distinctive variation was the Edmundson-designed Valley Community United Presbyterian Church, also built in Portland's fast-growing West Slope area.

A dramatic effect has been obtained by Edmundson in his use of the beautiful curving parabolic arch. He calls the glue-laminated arch, a new, modern tool of the architect, whose only limitation is the extent of the designer's own imagination and daring.

Valley Community is the modern version of what Edmundson's predecessors designed for the small parishes of the English countryside. Here he has kept the exposed wooden beams, so much a part of most churches. The purlins have been stained to match the arches, all of which against the white background of the masonry walls and ceilings give a dignity and gracefulness that is soothing and restful. Edmundson defines the glue-laminated arch as essentially a triangle anchored at two base points and at the ridge. He likes the wide flexibility of this laminated arch which can be built up into so many shapes and sizes.

THE Community Congregational Church of Chula Vista, California, designed by Walter C. See, of San Diego, demonstrates a V-type arch with a parabolic curve. Architect See points out that this style of arch is ideal for the balcony-type nave height as well as the lower roof line. Laminated arches were selected for this church because of their acceptable appearance, See reports.

The Chula Vista Church has several outstanding architectural features. Radiant-convection heating has been provided in the solid cast concrete slab. The nave floor is a slab over a system of metal domes which permits the flow of warm air under the entire slab. Additional convection heating is also provided by ducts from below the slab to warm air registers in the side walls. Fresh air can also be introduced by this system. Cold-cathode indirect lighting has been installed in the nave.

COMMUNITY CONGREGATIONAL CHURCH
Chula Vista, California • **WALTER C. SEE, Architect**





MONTICLAIR METHODIST CHURCH

Oakland, California • DAVID A. WRIGHT, Designer

OAKLAND, California's architectural designer, David Archibald Wright, has come up with one of the most remarkable church structures in the very different Montclair Methodist Church of Oakland.

The main nave has been built with parabolic glulam arches thirty-six feet in length. The graceful lines of the parabolic arch gives a roundness and a delightful fullness to the main church room. The solid wooden decking of the roof has been finished with the arches to retain much of the natural grain and beauty of the wood.

It is in the entrance that designer Wright has shown fine imagination. The entire front entrance of the church is glass so that one may stand on the concrete walkway entrance and see the full length of the church interior. A friendly pylon on one side and a low masking wall of brick on the opposite break any naked effect. The result is charming and friendly.



One of the more dramatic of the new churches is the Montclair Methodist in Oakland, where David Archibald Wright has conceived something new and striking with its "open face" doorway and side, and wide floor-to-floor arching interior.

The gracious exterior with impressive spire is forerunner of beautiful curved lines and parabolic arches to be found in the interior of the modern Western church structure.



FIRST PRESBYTERIAN CHURCH

Santa Rosa, California

C. A. CAULKINS, Jr., Architect

WHEN C. A. Caulkins, Jr., was asked to design the First Presbyterian Church of Santa Rosa, California, he was confronted with the usual problem of economy, getting the most church building for the least money. He said he was never in doubt from the beginning that he would use the laminated arches. The arches, he says, add a great deal to the beauty of the church room as well as giving it a character. By eliminating truss members, rods and the usual metal fittings associated with non-laminated arches, Caulkins said the general appearance of the church was improved.

The boomerang arches used at Santa Rosa demonstrate still another style of arch which can be built up with the glue-lamination technique. Here the heel of the arch becomes part of the wall frame.

Interesting, modern church interior of newer architectural design.



OSWALD BERG, Jr., an outstanding architect of Bozeman, Montana, has added a refreshing note to his conception of the modern church building. His Hope Lutheran Church, of Bozeman, eliminates the solid confining walls of most churches, gives parishioners a full view of the outdoors with full-length windows along both sides of the nave. White-glazed windows behind the chancel light up that portion of the church structure with a pleasing warmth. Berg has departed from the sternness of older church design and has achieved, with the aid of boomerang-type arches, a house of worship which has a "welcome-home" atmosphere.

HOPE LUTHERAN CHURCH

Bozeman, Montana

OSWALD BERG, Jr., Architect

A feeling of friendliness has been obtained in this modern Montana church as the liberal use of windows has stimulated a closeness to the out-of-doors. Simplicity of exterior and interior design contributes to the friendliness of the parishioners.





ZION LUTHERAN CHURCH

Portland, Oregon • **PIETRO BELLUSCHI**, Architect

PORTLAND'S Pietro Belluschi, who has recently become dean of Massachusetts Institute of Technology school of architecture, has created many a fine church structure in the Oregon country. Probably one of his most noteworthy is the Zion Lutheran Church which nestles just at the foot of Portland's upward sloping hills.

Simplicity is the keynote of this very distinctive house of worship. Belluschi has combined graceful, reaching laminated arches with timbered ceilings and brick walls. A feature of the brick walls are the glass brick "windows" placed at odd spaced intervals along both walls of the nave. The glass bricks give a life to the otherwise solid brick wall which is most pleasing and comforting. Belluschi has made excellent use of native woods around the chancel with vertical wood paneling on the sides and across the end. The upsweeping arches give a marked feeling of strength as they blend into the natural wood ceiling and supporting purlins and bracing.

Using laminated arches, native woods, and brick, Architect Belluschi has created a church here that attracts attention of students as well as layman. Detail illustration shows beauty of design and imagination.





One of the rarest of the new churches on the West Coast is the lovely Oneonta Congregational Church of South Pasadena. Recognized nationwide, it is a striking symbol of beauty from the exterior and the finished interior is complete.



ONEONTA CONGREGATIONAL CHURCH
South Pasadena, California
MARSH, SMITH & POWELL, Architects

THE arches, purlins and two-inch, tongue-and-groove sheathing were left in their natural and original color as much as possible, and only a small quantity of stain was used. The contrast against the plaster is good. The distinctive mood of Christian worship has been faithfully retained in the splendid Oneonta Congregational Church.

The striking beauty of the Gothic arch has been captured to a remarkable degree in this church. The architects used forty-six foot arches which are distinctive for their graceful lines and their depth. Features of the old English church have been achieved here, the combination of plaster walls and timber. Some prefer to call the design of this church American-California, disclaimed as modernistic, but holding strong to the heritage of the past. Actually, the Oneonta church is an exceptional building, combining many new features, such as direct and indirect lighting around the chancel and in the sanctuary. Particularly noticeable is the way the architects let some of the inner beauty of the building show through. This is true in the treatment of a solid concrete wall where small stained glass windows have been used so effectively they are as beautiful from without as from within.

THE late Architect Harry L. Pierce has skillfully used the Gothic arch in his Gardena, California, Methodist Church, and has chosen to cover the timbered members. The beauty of the lines of the fabricated arches is there, but they have been plastered to achieve an unusual effect. Only a tracery of wood is visible against the ceiling whose stained surface shows to advantage against the white of the plastered walls and ceilings. This is a beautiful church and illustrates the wide variety of stylings being adopted to western church design.

GARDENA METHODIST CHURCH

Gardena, California

HARRY L. PIERCE, Architect* **A. E. HOWLAND, Engineer**

**Deceased*



IN the San Marino, California, Community Church, Allison & Rible, Los Angeles architects, have captured a very pleasing effect with a modified form of the Gothic arch. The heavy arches, which have been left exposed with satisfactory results, have been rounded at the peak to break the sharp juncture of the Gothic interior. There is an accentuation of great weight in these arches which matches well the full wall of smaller support arches along the nave. There is definitely a feeling of strength in this interior, a symbolism undoubtedly consciously striven for by the architects.

SAN MARINO COMMUNITY CHURCH

San Marino, California

ALLISON & RIBLE, Architects



ARCHITECT B. H. Anderson, of Pomona, has done some of California's better known church structures. The Riverside Immanuel Lutheran Church is one of his latest and comes close to being a replica of some of the centuries-old English churches. Its heavy-timbered ceiling is supported by graceful laminated arches which show up in dark richness against the plaster walls of the nave. Here is a church building with a character and heritage identified in the minds of millions with the Christian religion.

IMMANUEL LUTHERAN CHURCH

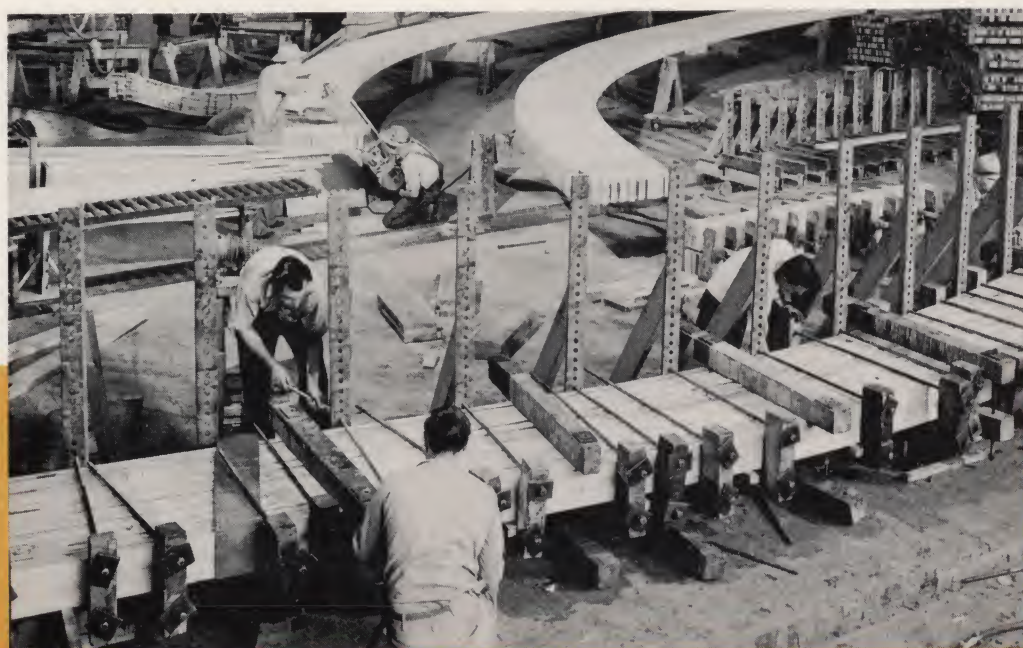
Riverside, California

B. H. ANDERSON, Architect

SO MANY CHURCHES retain the cruciated or cruciform floor plan that architects are constantly confronted with designing roof sections which retain grace and form where nave and transept meet. The flexibility of the laminated arch has opened up immense possibilities which hundreds of architects and designers are adapting to these and other needs. The variety in size, length and shape possible

in laminated arches permits a wide latitude in design and combination of uses.

The architect and designer of today is limited only by his own imagination. The Western churches shown here, and hundreds of others throughout the nation, illustrate how this freedom of design is producing beautiful churches in keeping with tradition, heritage or religious mood.



WOOD IS IDEALLY SUITED TO TODAY'S MODERN DESIGN

Architects and designers throughout the nation are taking advantage of wood's natural strength and beauty. Structural timbers and fabricated trusses answer their need for long post-free spans in today's industrial buildings. Laminated arches combine this same spanning feature with lofty beauty for churches, gymnasiums and similar types of buildings.

Sturdy wood framing serves as the base for beautiful effects achieved with wood siding, sash and trim for exteriors. Wood paneling and trim add distinction to interiors of offices, classrooms and business properties.

WEST COAST WOODS

*Douglas Fir
West Coast Hemlock
Western Red Cedar
Sitka Spruce*

For additional copies of this free booklet, or for free copy of "Standard Specifications for the Design and Fabrication of STRUCTURAL GLUED LAMINATED LUMBER", write to:

WEST COAST LUMBERMEN'S ASSOCIATION
1410 S. W. Morrison Street • Portland 5, Oregon

From framing to finishing, West Coast Woods are fulfilling the requirements of today's attractive functional buildings.

Digitized by:



ASSOCIATION
FOR
PRESERVATION
TECHNOLOGY,
INTERNATIONAL

www.apti.org

BUILDING
TECHNOLOGY
HERITAGE
LIBRARY

<https://archive.org/details/buildingtechnologyheritagelibrary>

From the collection of:

Mike Jackson, FAIA